**REQUEST FOR WAIVER**

**EXPEDITED ACTION REQUESTED**

The Arizona Public Service Company (APSC), pursuant to §1.925 of the Rules and Regulations of the Federal Communications Commission ("Commission"), respectfully requests a Waiver of the Commission's 800 MHz licensing freeze[1] to permit the Grant of authorizations to operate its newly planned implementation of a State-of-the-Art, P25 Phase II, 800 MHz Trunked Radio System throughout the State of Arizona, inclusive of a few sites beyond the State's borders into New Mexico and California.

## Background

APSC is the State's largest and oldest electric service company, safely generating and distributing electricity to more than 1.2 million customers[2] of the 1.85 million Statewide[3] population. APSC expects to serve nearly two million customers by 2030[4]. APSC is responsible for more than 20 renewable energy stations ranging in technology and size. Currently, more than 300,000 customers today are supported by Renewable Energy: Wind, Solar, Biomass,

---

[1] FCC Public Notice, DA 16-189, WT Docket 02-55, Released March 1, 2016
*https://apps.fcc.gov/edocs_public/attachmatch/DA-16-189A1.pdf*

[2] Arizona Public Service Company Website – Company Profile
*https://www.aps.com/en/ourcompany/aboutus/companyprofile/Pages/home.aspx*

[3] Arizona Corporate Commission's Website, 2014 Electric Company Annual Reports
*http://www.azcc.gov/Divisions/Utilities/Annual%20Reports/Electric.asp*

[4] Ibid. 2

Geothermal and Biogas generation stations. The remainder and bulk of APSC's customers – nearly 1 million, are supported by three coal-fired power plants, seven natural gas-fired power plants, and one nuclear power plant (Palo Verde Nuclear Generating Station, i.e. PVNGS). PVNGS[5] is the largest nuclear power generation facility in the continental U.S.

APSC, as a Critical Infrastructure Industry, uses two-way radio for effective, reliable, and efficient communications between service personnel and dispatchers working on substations, distribution lines, and transmission lines throughout the state, and at the various generation facilities and is of paramount importance to safeguard the security of the APSC infrastructure. There are approximately 6,400 employees at APSC[6]. As such, the planned P25 Radio System is a Critical Component for APSC and a high degree of redundancy and resiliency will be built into this new standards-based communications network to safeguard Critical Infrastructure for the safe and efficient generation and delivery of electricity and protect its employees. Additionally, this redundancy, resiliency and reliability are extremely critical during outages, whether natural or planned, where, without efficient communications, effective and efficient service becomes difficult to maintain. Additionally, APSC shares its current legacy Radio System and plans to share this new P25 Radio System with the State of Arizona Department of Emergency and Military Affairs (DEMA)[7], who currently uses the APSC Radio System for similar purposes of having a reliable and resilient communications tool for state wide emergency response.

---

[5] Arizona Public Service Company Website – Company Profile
***https://www.aps.com/library/careers/PaloVerdeVisitorsGuide.pdf***

[6] Arizona Public Service Company Website – Careers / Employee Values Proposition
***https://www.aps.com/library/careers/apsCollege.pdf***

[7] Arizona Department of Emergency and Military Affairs Website – Emergency Management Page
***https://dema.az.gov/emergency-management/communications-and-technology/communications/radio-systems***

Arizona has 15 counties, and each county has an Emergency Operations Center (EOC) with fixed control stations and some user radios that utilize the current APSC Radio System.

Since the current Radio System architecture has – per the manufacturer – reached its End-of-Life (EOL), APSC is in the process of implementing a completely new, future-ready, standards-based two-way Radio System. In order to facilitate uninterrupted service to current Radio System users, APSC is deploying the new P25 Radio System in parallel with the existing system. Additionally, APSC has planned to increase the level of coverage provided within the APSC service territory and along key transmission line corridors by also deploying additional tower sites for the new P25 Radio System, which will further increase the reliability of the two way radio system and the safety of APSC employees that rely on it and the security of the APSC infrastructure.

This simultaneous operation and addition of tower sites requires additional spectrum to be licensed. Therefore, APSC has a need to receive Grants of 800 MHz license modifications during the FCC's 800 MHz application freeze period[8]. Parallel operations of old and new radio systems are paramount for the safety of APSC personnel and the critical nature of their daily business – supporting the continuous safe delivery of electricity to its customers – the definition of Critical Infrastructure Industry (CII). DEMA is also dependent on our relationship to safeguard their ability to communicate to the various State EOC's if a state emergency is declared. DEMA also uses the APSC Radio System to support the PVNGS Emergency Plan[9] in concert with the Maricopa County Dept. of Emergency Management (MCDEM), and the Arizona

---

[8] FCC Public Notice, DA 16-189, WT Docket 02-55, Released March 1, 2016 ***https://apps.fcc.gov/edocs_public/attachmatch/DA-16-189A1.pdf***

[9] Maricopa County, AZ Website – Department of Emergency Management PVNGS Emergency Response Page ***http://www.maricopa.gov/emerg_mgt/pvngs.aspx***

Radiation Regulatory Agency (ARRA)[10] to protect the public. Drills are routinely conducted throughout the State using the APSC Radio System for preparedness in concert with local law enforcement agencies with whom APSC has embraced interoperability.

## Frequency Assignment Methodology

A detailed search of the Industrial & Business (I/B) 800 MHz band within 113 km of the Arizona State borders was performed, returning all currently licensed incumbents. From this search, a matrix of available channels by site was generated.

Using this availability matrix in conjunction with established preclusion criteria and network design requirements, APSC performed a Carrier-to-Interference analysis for each of its sites to establish a channel re-use "policy". Then, based on an iterative assignment methodology, keeping in mind the required transmitter-to-transmitter separation criteria, APSC identified two (2) new 800 MHz I/B channels for each APSC site.

Pursuant to FCC ULS and the Transition Administrator review, these channels are available today. These frequencies are not in the Rebanding NPSPAC band (851-854 MHz), have not been previously licensed or held by Nextel (or any of its subsidiaries), and are on Standard FCC designated channel centers (not offset channels). Further, with respect to the International Border, the Channels sought in the Border Sites are identified as US Primary and identified as (I/B) channels post-Rebanding.

As a result of this methodology, and the accompanying Certification by an FCC Certified Coordinator, APSC purports that there will be no interference to existing incumbents –

[10] https://azrra.az.gov/emergency-response/palo-verde-nuclear-generating-station

including itself – and that Grants for the requested channels will not be disruptive to the Rebanding process.

## Need for Waiver Request

§1.925(b)(3) of the FCC Rules and Regulations states:

> ***The Commission may Grant a waiver if it is shown that***
>
> ***(i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a Grant of the requested waiver would be in the public interest; or***
>
> ***(ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.***

APSC is faced with the unique fact that the State of Arizona is one of the last regions within the continental U.S. still under an 800 MHz Application Freeze. This does not change the circumstances that the APSC radio network is in need of replacement and that APSC has executed a contract for a replacement system. Radio system outages will undoubtedly occur as the current system is unsupported and has reached its End-of-Life. It is noteworthy that the Commission – in its Rebanding Order – reminded potentially affected licensees of the Commission's Waiver Process.[11] Thus, it is apparent that the Commission believed that there would be a need for such waivers, however, APSC is aware that the Commission will not Grant a Waiver Request merely because it contemplated such a need.

---

[11] FCC Report and Order, 04-168, WT Docket 02-55, Released August 6, 2004, Page 110, Paragraph 204 ***https://apps.fcc.gov/edocs_public/attachmatch/FCC-04-168A1.pdf***

The unique circumstances that warrant the Commission Granting this Request for Waiver are fairly straightforward. Although the circumstances may be obvious, a clear description of APSC's needs for such action is provided below.

***Simultaneous Operation***

The current communications system, utilizes one frequency as a Control Channel, for the Centralized Trunking Technology employed, and one frequency for each working (voice) channel. By design, at least three channels need to be present at every site for APSC fail-over and Grade of Service metrics. Since many of the sites are already constructed in this fashion, there are no additional channels currently licensed to APSC to establish its new P25 system without detrimentally impacting current system availability and performance.

Because of this lack of sufficient spectrum, APSC cannot test and transition to a new radio system on the same frequencies as the old system for the simple fact that the new and old systems would interfere with each other. This interference would dangerously impact operations as critical communications would be disrupted due to destructive interference, which would only be further exacerbated should there be an event, planned or not, requiring full radio system capacity.

In the same stead, the new radio system could not be properly reviewed, tested and characterized and optimized as interference received from the existing operation would make traffic unintelligible and signal level measurements impossible for acceptance testing.

***End-Of-Support***

The current APSC system is a Motorola SmartZone™ 800 MHz Trunked Radio Network. This system is effectively no longer supported. See notice provided by Motorola Solutions, Inc., attached hereto as Appendix A. Given Motorola's notice, APSC has planned, specified, budgeted, procured, and contracted a new P25 Phase II 800 MHz trunked radio network. Implementation of the new radio network is already underway and initial antenna system installations are planned to begin in the Summer of 2016, with the first new base stations planned for deployment in Fall of 2016.

***Frequency Reconfiguration Agreement***

APSC did not complete the planning and procurement of its replacement radio system until a Frequency Reconfiguration Agreement (FRA) was executed with Sprint. APSC recognizes that its planned system upgrade must not impact either APSC's or other licensee's progress in Rebanding.

Exercising due diligence, APSC considers that the funds negotiated to support the Rebanding of some of the sites in the Mexican Border Region may in-fact be best served by the installation of the new P25 system equipment rather than an attempt to Reband the existing equipment.

APSC anticipates three potential scenarios related to Rebanding and deployment of the new radio system:

1.) Replacement frequencies become available in the Mexican Border area but the new system is not yet ready to be deployed, or completely cutover to, within that area. ASPC's old border-area infrastructure would be reconfigured on replacement channels, with no FRA impact, and APSC would be required to develop modified

migration strategies for deployment of new subscriber radios and integration with new infrastructure deployed in other regions. Note that the first touch of the existing APSC subscriber radios has already been completed.

2.) The new system would be built out in the border area without the benefit of replacement frequencies, in other words the new system would be constructed using pre-Rebanding frequency assignments. If the new system is built on old frequencies, APSC's FRA may have to be renegotiated to capture any change in costs to Reband the new system equipment at such time as replacement frequencies are available.

3.) If the timing of the new system construction aligns with the availability of the replacement Rebanded frequencies, APSC may request that the negotiated costs to Reband old equipment instead be applied towards installation of the new equipment.

APSC will continue to work in earnest with the FCC, the Transition Administrator, and with Sprint-Nextel, to ensure transparency in the 800 MHz Reconfiguration and ultimate replacement of the APSC radio network.

***Conscientious Frequency Selection***

APSC is exercising due diligence in minimizing the available 800 MHz spectrum needed for implementation of its new P25 Phase 2 system and is currently requesting only two new frequencies at any APSC sites, since testing can be done at each site with only one control channel and one working Channel to provide two talk-paths – a benefit of P25 Phase II technology. At those sites where more than two channels are needed to satisfy APSC loading requirements, APSC plans a frequency transition of existing spectrum from current licenses to the new system architecture, via future licensing modifications or new applications.

For those sites that are new to APSC, the first two channels are new and the third or fourth channels – as required – are derived from APSC licenses currently held. Upon the final system acceptance, those frequencies found not to be required will be Cancelled after APSC has ascertained that sufficient spectrum has been assigned to prevent system queueing and all interference issues – should any be found – have been mitigated.

***APSC Alternatives***

APSC has evaluated all of its options for transitioning to its new system and believes that there is no reasonable alternative but to seek relief from the Rebanding freeze to make available additional 800 MHz I/B channels to seed the new operation. As a matter of public interest and safety to its customers, PVNGS, DEMA, various state public safety agencies, and APSC's employees, APSC respectfully requests the Commission act in an expeditious manner in Granted the required waiver as APSC is in the process of breaking ground for new sites, and antennas and base station equipment are currently being manufactured. Interference free operation is paramount both to APSC's old and new systems and absent additional spectrum assigned immediately – system testing, optimization and smooth transition from old to new cannot occur.

***Transition Administrator Support***

The Transition Administrator has – from initial conception of the spectrum plan – been party to open dialogue with APSC and approves of the frequencies selected.

***Permanency***

The Commission allows for Special Temporary Authorizations during the Rebanding Freeze, presumably to facilitate immediate licensure should frequency planning prove to be difficult and subject the licensee to change(s). APSC seeks relief from the Commission on this point given the imminence of Rebanding completion in and around the State. APSC however, understands and stipulates that if frequency changes are needed, APSC will work in earnest with the Commission, the Transition Administrator and other impacted parties to review, replace and return spectrum that may be needed to streamline the Rebanding process.

## Conclusion

APSC opines that this request will not frustrate the Commission or other licensees, is consistent with other Commission Grants allowing applications for new spectrum during the freeze, is in the best interest of the Public and tremendously assists APSC with meeting its ultimate goal for this program; a new, standards- based, radio system that provides APSC – and it's Public Safety Partnering Agencies – a robust, resilient, reliable and interference free, radio network. Moreover, speedy construction of the new system transitions APSC's operation away from an aging infrastructure that is no longer supported and now difficult to maintain.

Accordingly, APSC respectfully requests a Waiver of the Rebanding Freeze to operate on the proposed 800 MHz channels identified in the associated applications and requests that these license applications and this request for waiver be Granted for the reasons prescribed herein and asserts that such action is in the best interest of the Public, nearly two-million APSC customers, and APSC employees.

**APPENDIX A**

**END OF SUPPORT STATEMENT**

# Motorola SMARTNET® and SMARTZONE® Systems

## End-of-Support Policy Reminder Notice

### OVERVIEW

Motorola delivered a number of SmartNet® and SmartZone® systems over significant period of time. When major system components had to be discontinued due to parts and/or technology obsolescence, Motorola communicated the last shipment and end of support dates for the affected components.

This communication provides a reminder notice to give field teams and customers the opportunity to determine appropriate migration strategies to maintain operational readiness and support. This document also highlights those major system components and their end of support dates for the affected customers. In the past, various dates have been published in regards to parts support. The intent of this document is to outline all SmartNet® and SmartZone® systems support service availability.

### SYSTEM DESCRIPTION - END OF SUPPORT

| Systems | Last Ship Date | End of Technical Support |
|---|---|---|
| SmartZone Systems | 12/31/2005 | 12/31/2015 |
| SmartNet Systems | 12/31/2009 | 12/31/2012 |

## MODEL DESCRIPTION - END OF SUPPORT

The following models are the major system components of the Smartzone® systems and their respective support dates. Each model referenced includes: Field Replacement Units (FRU's), boards and subassemblies.

| Product When used in SN / SZ Systems | Last Ship Date | End of Technical Support | End of Depot Repair | End of Dispatch/OnSite /NPM Support |
|---|---|---|---|---|
| CENTRACOM AEB / CEB | 12/31/2009 | Same as System | 12/31/2018 | 12/31/2018 |
| MTC 3600 SMARTZONE and SMARTNET | 03/31/2011 | Same as System | 12/31/2018 | 12/31/2018 |
| DIGITAC & ASTRO TAC 3000 Comparator | 12/31/2011 | Same as System | 12/31/2018 | 12/31/2018 |
| MTR 2000 | 03/31/2011 | Same as System | 12/31/2018 | 12/31/2018 |
| QUANTAR | 12/31/2011 | Same as System | 12/31/2020 | 12/31/2020 |
| IMP SmartZone Controller | 12/31/2004 | Same as System | 12/31/2009 | 12/31/2009 |
| MZC 3000 SmartZone Controller | 12/31/2008 | Same as System | 12/31/2015 | 12/31/2015 |
| 6809 Controller | 12/31/2002 | Same as System | 12/31/2009 | 12/31/2009 |

## SMARTZONE SYSTEM MONITORING:

The equipment required to monitor legacy SmartZone systems has been discontinued and is no longer supported from a software or hardware perspective. Monitoring requires agreement to the SOW terms and conditions regarding the availability of monitoring service if there is an equipment malfunction. As a result, Motorola will no longer be able to support contract renewals after December 31st, 2016. Customers who have already signed multi-year contracts through 2017 will be honored, however if a malfunction of monitoring equipment occurs during the contract period, the contracted service will end.



MOTOROLA